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ABSTRACT

In spite of societal and economic changes, our schools still operate as they always have. Career education models will become a major tool in resolving educational problems and needs, and in reordering priorities for North Dakota. Educational and socioeconomic statistics confirm the current inadequacy of vocational preparation by our public education systems. There is a very real need for post-secondary training for the rapidly expanding professional and technical occupations. To correct this situation, a comprehensive vocational development program is needed which would involve cooperative interrelationships among the home, family, community, and the world of work. Tables and charts present the data, and an action plan for implementing career education in North Dakota outlines the personnel, resources, and activities needed. (AG)

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LET'S GET WITH IT!

By: Dr. Clair T. Blikre, President
North Dakota State School of Science

An Address for:

All-Service Vocational Education Conference
Bismarck, North Dakota
August 15, 1972

We live in the most productive, highly scientific and technological society ever known to man! Surely, the American system of education has made a significant contribution to this development. Even today, in spite of what you may hear, the American people hold education very high among their values, and look upon education as the ultimate resource for the resolution of many of our complex social problems! The fact that people look upon education to solve such deep and stubborn problems as racial integration, unemployment, mental health, environmental control, and elimination of poverty, as well as preparation for a good life and a livelihood, indicates the fundamental faith the American people have in their schools.

But, all is not well! In spite of the increasing financial effort, the system that helped bring our great land to this day has not changed appropriately with the times! At the heart of the problem is a false societal attitude that worships a college degree as the best and surest route to occupational success. Thus, more and more parents, taxpayers, and students, too, are doubtful that the purpose of all education - "To prepare persons to make a living and to live a productive, useful and rewarding life" - is being achieved. A growing feeling stalks the land that: "American education is not preparing the majority of students to not only live but to earn a living commensurate with their desires, their talents, and the nation's needs;" rather, education has been too busy preparing students for more education!

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Parents are asking: What are our young learning, for what?

Taxpayers are asking: What are we buying for our tax dollar?

WHY? WELL, WHAT IS THE PRESENT STATE OF AFFAIRS?

1. Each year the ranks of the school drop-outs increase by 2.5 million.

2. An estimated 15 million students in this country are functionally illiterate;

3, One-third of all high school graduates taking a fifth grade level Armed Forces Qualifying Exam fail it.

4. Nearly 25 percent of the young people who turn 18 each year are not trained for adequate employability.

5. We do not have a meaningful program when we have largely blanket provisions for all; when, as we well know, we cannot even treat or educate each of our children the same way. Achievement must represent more than perseverance and time!

6. RESULT:

   A. A waste of money and human resources.

   B. Young folks who cannot qualify for decent jobs distrust the society which reared them.

   C. Those who have no jobs in an affluent community lash out in anger and frustration at society.

   D. While more and more money is being spent for all education, 85 billion annually, almost 1/3 is spent on those dropouts prepared only for disenchantment, unemployment, aimlessness, failure.

   E. The nation supports numerous remedial programs, some of which cost as much as $12,000 for every person placed on a job.

F. Those who remain unemployed may cost $4,000 or more per year in welfare support, and this will be repeated year after year.

G. Even more distressing are the losses in confidence and self-esteem, plus the abasement, non-fulfillment, the drift that burdens these young, who later show up as the:

Unemployed,
Welfare recipients, and/or
Crime statistics.

The facts are obvious - our economy can rightfully absorb:

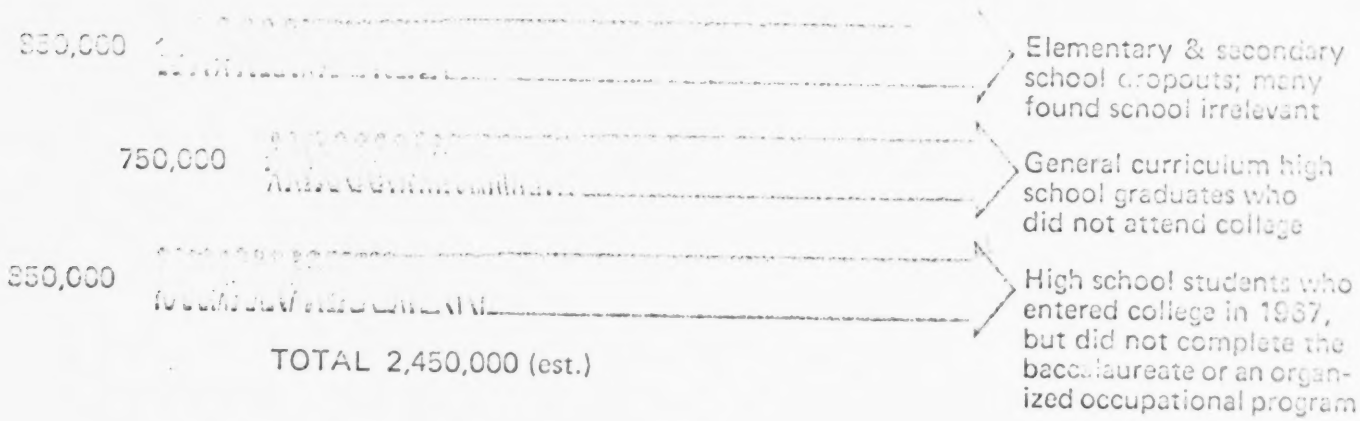
100% = Total
20% = 4 or more years of college training
5% = No specific training
10% = Welfare recipient
65% - 75% less than 4 years post-secondary training.

Schools Are To Serve: PEOPLE
SOCIETY

ARE THEY DOING SO?

THE PROBLEM

Nearly 2.5 million students leave the formal education system of the U.S. each year without adequate preparation for careers. In 1970-71, there were:


850,000
Elementary & secondary school dropouts; many found school irrelevant
750,000
General curriculum high school graduates who did not attend college
850,000
High school students who entered college in 1967, but did not complete the baccalaureate or an organized occupational program
TOTAL 2,450,000 (est.)

Source: U.S. Department of Health, Education, and Welfare/Office of Education, DHEW publication No. 72-39, Career Education, 1971

While societal and economic changes have continued, our schools have, generally, continued to operate in the "same old way." The needs of students and adults in today's world are much too extensive and complex for schools to function as they have in the past! Largely ignored were the facts of life:

- That machines have taken the place of the unskilled worker in most of the major fields of employment. The unskilled and slightly skilled person's ability to support himself and family with dignity is becoming increasingly difficult.
- That our nation has achieved a level of general literacy which requires that most people not only read and write but exercise a functional literacy with regard to arithmetic, social understanding, and the tools which basic education provides as a base for learning to live and to earning a living in society; and
- That the accumulated results of applied science and technology to all facets of the nation's work have radically changed the world of work to a more demanding educational preparation where the specialization needed must in a large measure be learned by adults after high school.

This simply means the educational community must:

1. Reorder educational priorities that are meaningful to life;
2. Outgrow fixations on academic education;
3. Properly prepare our people (students and adults) to live and work in society where technical and skilled occupational persons predominate, not only the professional persons.

WHAT ABOUT THE 1970'S and 1980'S?

The 1970's will bring the largest number of young men and women seeking their place in society.

As a result, several factors are apparent:

1. 1972 is the last year, for as long as we can now visualize, in which 17-18-year-olds form the center of gravity of our population;
2. During the 1970's, there will be a 34 percent increase in the 20-24 age group, and the number of people in the 25-34 age group will grow by almost 60 percent. One in every four workers, 26 million, will be in this age group by 1980;
3. During the 1970's, 40 percent more people will be seeking jobs each year than in the previous year;
4. There will be 26 million more people to feed, house, educate, and provide jobs for in the next 10 years. A rise of 14 million more households by 1980 and with a sharp rise in weddings; it is expected the births during the 1970's will exceed 5 million by the early 1980's. It is suggested there will be immense new markets for homes, home furnishings, autos, clothes, recreation, and a demand for a variety of other goods and services;

5. By 1980, the Bureau of Labor Statistics predicts there will be slightly more than 100 million gainfully employed workers:

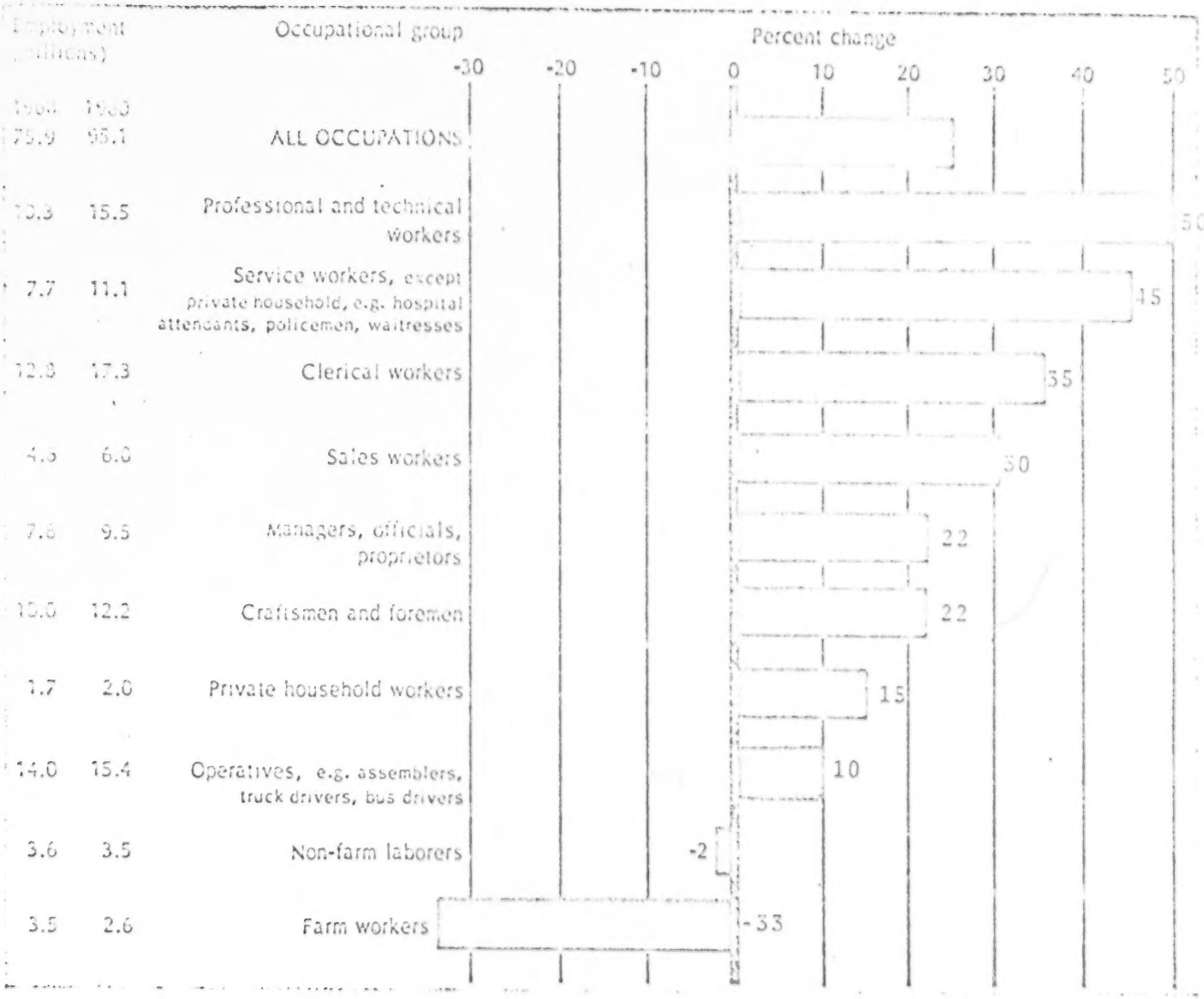
. More workers will continue to come into the labor pool than leave (41 million in - 26 million out, a plus factor of 15 million);

. Thirty-four million new workers - (better trained);

. Six million women (after raising family); and

. One million immigrants.

THE FUTURE MAJOR OCCUPATIONAL OPPORTUNITIES



Source: NEA Journal, Tomorrow's Jobs, January 1972, Pages 42-46

Table 2. Employment by major occupational group, 1968 and projected 1980 requirements
(In thousands)

Occupational Group	1968		Projected 1980 requirements		Change 1968-80	
	Number	Percent	Number	Percent	Number	Percent
Total	75,920	100.0	95,100	100.0	19,180	25.3
White-collar workers	35,551	46.8	48,300	50.8	12,749	35.9
Professional and technical	10,325	13.6	15,500	16.3	5,175	50.1
Managers, officials, and proprietors	7,776	10.2	9,500	10.0	1,724	22.2
Clerical workers	12,803	16.9	17,300	18.2	4,497	35.1
Sales workers	4,647	6.1	6,000	6.3	1,353	29.1
Blue-collar workers	27,525	36.3	31,100	32.7	3,575	13.0
Craftsmen and foremen	10,015	13.2	12,200	12.8	2,185	21.8
Operatives	13,955	18.4	15,400	16.2	1,445	10.4
Nonfarm laborers	3,555	4.7	3,500	3.7	-55	-1.5
Service workers	9,381	12.4	13,100	13.8	3,719	39.6
Farm workers	3,464	4.6	2,600	2.7	-864	-33.2

Note: Because of rounding, sums of individual items may not equal totals.
Source: Bureau of Labor Statistics.

Source: Occupational Manpower and Trg. Needs, U.S. Dept. Labor, 1971.

SUMMARY:

Occupational Needs [3]

In 1980, according to Flanders, 80% of all jobs will require less than 4 years of college despite the rapid rise in professional and technical fields.

Our present educational structure implies that there is a pattern of elementary, secondary, and postsecondary education that will fit every young person. It might also imply that a next step in either education or employment is relatively stable and that we can predict the future with a high degree of certainty. Apparently these conditions do not now exist and it is less than likely that they will in the future. What does this mean for education?

The projections for the seventies indicate the following specific job opportunities:

White Collar Workers

1900 - 18% of the work force
1980 - 50% of the work force

This includes:

professional and technical	-	50% increase
clerical	-	33% increase
computer operators	-	over [illegible]% increase
office machines	-	40% increase
secretaries, stenographers, etc.	-	33% increase
sales and managers	-	25% increase

Farm Workers

1900 - 37% of work force
1980 - 3% of work force

Blue Collar Workers

1900 - 37% of work force
1980 - 33% of work force

Service Workers

1900 - 8% of work force
1980 - 13% of work force

[3] Source: ACT, Emerging Students...and the New Career Thrust in Higher Education. 1971 ACT Conference, May 3-4, 1971 P. 80

Future Major Occupational Opportunities: [4]

1. Professional, technical and service occupational groups will grow fastest.

A. This occupational group will increase by 50 percent by 1980;

B. One in four jobs will be in professional, managerial, and technical occupations, and while white collar workers will outnumber blue collar workers by more than 50 percent in 1980, we will still need two million more blue collar workers than in 1970;

C. Service occupations, excluding private households, will rank second only to professionals with a growth of 45%;

D. One-fourth of workforce will be craftsmen or service workers;

E. One in six will be in the clerical fields;

F. By 1980, for the first time, there will be as many professional and technical workers as blue-collar operatives;

G. Yet there will be many good jobs in the economy for which a high school education is sufficient; there will be more than 15 million operative jobs. Clerical occupations, with more than 17 million workers, will be larger than any other occupational group; and

H. Jobs in craft skills are increasingly well rewarded financially, reflecting a continuing need for highly skilled workers in the economy.

[4] U. S. Department of Labor, Bureau of Labor Statistics, Occupational Manpower and Training Needs, Bulletin 1701, Washington, D. C., 1971.

2. The largest number of employment opportunities will continue to be in the service-producing industries.

A. By 1980, service-producing industries will employ twice as many workers as goods-producing industries; and

B. This trend will lead to greater over-all job stability because employment levels in the service area are less affected by fluctuations in the economy.

3. Growth in part-time opportunities will likely parallel growth in workers who prefer part-time jobs.

4. The increasing need for working women underscores the need for day care centers, continuing training, and part-time employment.

A. By 1980, 59 percent of the workforce will be women who will provide one-fourth or more of the family income.

RESULTS:

1. Students and workers of tomorrow will spend:

- One-third of life - obtaining an education;
- One-third of life - working (36% sleeping; 20% working; 10% eating; and 34% in leisure, pleasure, thought); and
- One-third of life - retired and living off the fruits of labor.

2. Work and use of leisure time will be the primary concern of the next several generations,

3. Jobs will be more sophisticated, more complex, more abstract - in short, more mental and less physical;

4. Greater numbers, keen competition, but opportunities for persons who are trained - to earn a living, and to live!

YOU ASK: WHAT CAN BE DONE?

A concept stressed from Commissioner Marland to a law in Ohio known as CAREER EDUCATION: (may be one solution)

> "The total effort of education and community to help all individuals to become familiar with values of a work oriented society, to integrate those values into their personal value systems, and to implement these values into their lives in such a way that work becomes possible, meaningful, and satisfying." (Hoyt)

It implies equal recognition for:

- Preparation for making a living;
- Preparation for living.

A career is (or should be) a personally satisfying succession of productive activities hinged together over a lifetime and generally (or should be) leading toward greater satisfaction and contribution.

Therefore, it is stressed again that career education is preparation for a meaningful and productive activity, at work or at leisure, as employer or employee, in public or private sector, or in the family.

Key words are: Productive - Achievement.

MORE URGENT AIMS INCLUDE:

1. To make education effective for the person and more productive for the country;

2. To lead all persons to respect the dignity of work well done, and to hold in high regard those who do it;

3. To prepare its people to cope with the rapid changes which new technology causes in their personal lives; instant communication, social awareness, governmental systems, environmental awareness and responsibility, and other far-reaching social and psychological changes.

4. To enhance learning achievement in all subject areas and at all levels of education;

5. To blend personal and occupational learning so as to achieve whatever career one desires;

6. To prepare all students for a successful life of work by increasing their options for occupational choice, by eliminating barriers - real and imagined -

7. To assure that all educational experiences, curriculum instruction, and counseling services will be oriented to and preparation for:

- Economic independence;
- Personal fulfillment; and
- Appreciation for dignity of all work.

The GOAL of career education is to make work and a good life for each individual:

- POSSIBLE
- MEANINGFUL
- SATISFACTORY

CAREER EDUCATION:

1. Relates to all educational experiences from early childhood throughout the productive life of the individual. It is a total concept that should permeate all education, giving due emphasis to successful preparation for and development of a lifelong, productive career;

2. Attempts to build a harmonious, comprehensive system in which vocational and technical education are not separated from academic education, but are important parts;

3. Is a continuum of information on careers and self-appraisal of one's talents, interests, and aptitudes from kindergarten (or grade one) right through high school and into post-high school, be it vocational, technical, or baccalaureate programs;

4. Program may begin as early as kindergarten and continues through adulthood to provide curriculums that relate reading, writing, arithmetic, and other basic instructional needs to the many ways in which adults live and earn a living; (includes appropriate attitude, knowledge, skills building)

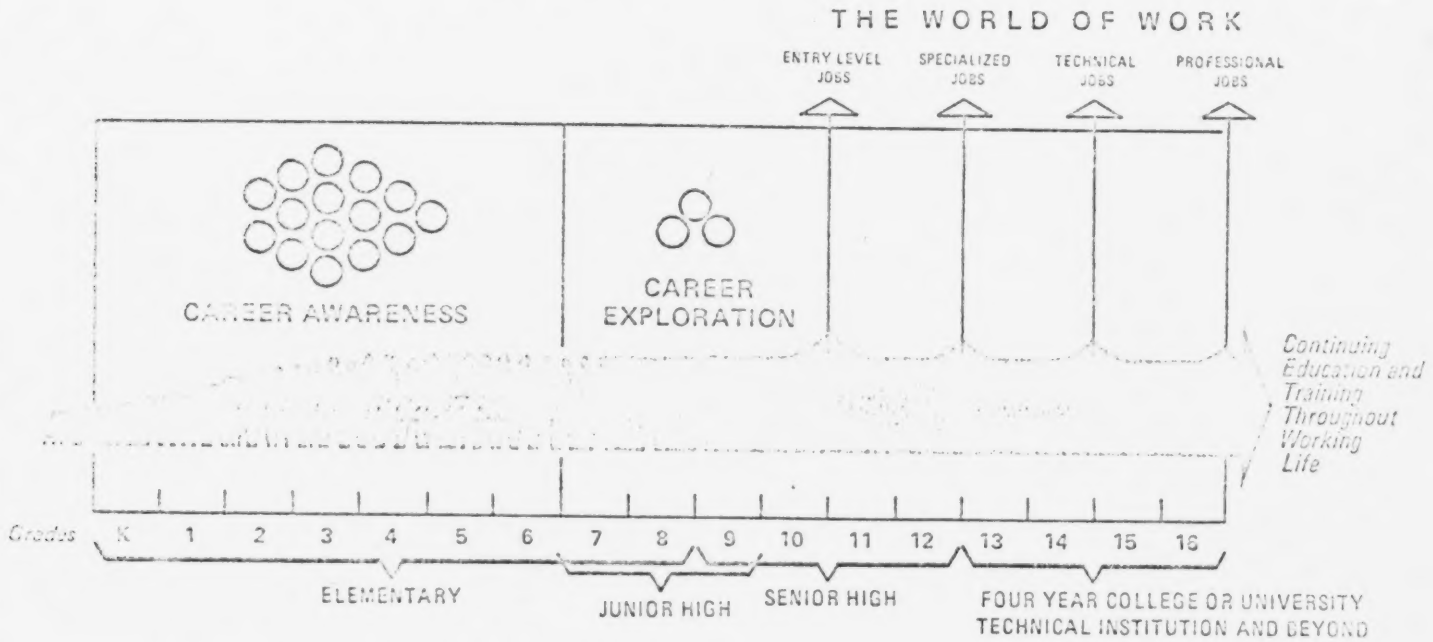
5. Specific objectives at each level of the school system should be developed, such as:

World of Work Awareness	-	Grades K-6
Career Exploration	-	Grades 7-9
Career Preparation	-	Grades 10-12
Technical, Vocational Education	-	Community College Level
Professional Education	-	4 year Colleges & Universities
Continuing Education	-	Thereafter

THE EDUCATIONAL REQUIREMENTS

...EDUCATION...

An Example of a ...CAREER EDUCATION Model



Source: U.S. Department of Health, Education, and Welfare/Office of Education, DHEW Publication No. (OE) 72-39, Career Education, 1971

Three essential phases in career education process for each individual:

1. AWARENESS

   . To help become familiar with values of work-oriented society, range of career options, and develop self-awareness.

   . To expose individuals to a variety of work value so will know and understand those that exist.

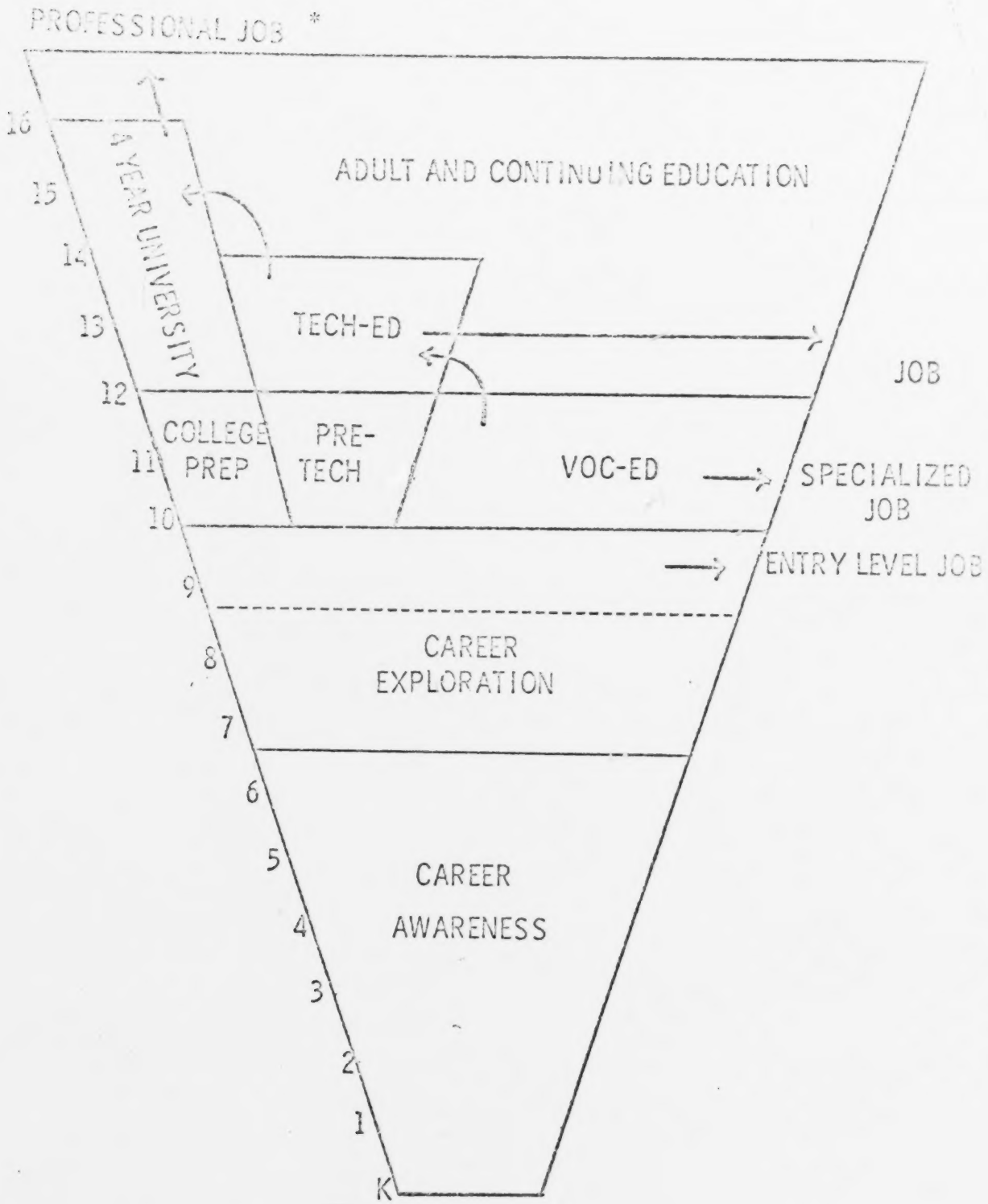
   . To help develop one's own work value by understanding those held by others.

2. EXPLORATION AND PERSONAL DECISION-MAKING

   . To help individuals integrate work values into their personal value system, and accept those work values congenial to his personal value system, by being involved in those activities and procedures that permit exploring the various forms of work and their value, and to make a more rational choice of a tentative career goal.

3. PREPARATION - IMPLEMENT WORK VALUES

   . To implement those activities and procedures (educational program and work experience) required for an individual to become proficient, for further training or for occupational skills and to then enter into employment. This is largely occupational preparation placement, and job success.



* CAREER EDUCATION: A Model For Implementation Division of Vocational and Technical Education; Bureau of Adult, Vocational, and Technical Education; U.S. Office of Education, Washington, D.C. May 10, 1971.

RESULT:

To achieve these objectives, is to make education relevant according to today's needs and the needs of the future. However, it will mean that:

The entire school Program must be re-structured. The basic subjects would be structured around the theme of career opportunities and requirements in the world of work.

While time or grade slots may vary, the following guidelines could serve as a base:

1. GRADE K-6 - CAREER AWARENESS

   A. To develop in each student self-awareness and positive attitudes about personal, individual, and the social significance of work.

   B. To become, through world of work emphasis, aware of diverse occupational clusters, and the wide range of jobs, their requirements, their relationships to each other, and to fellowmen, society and self.

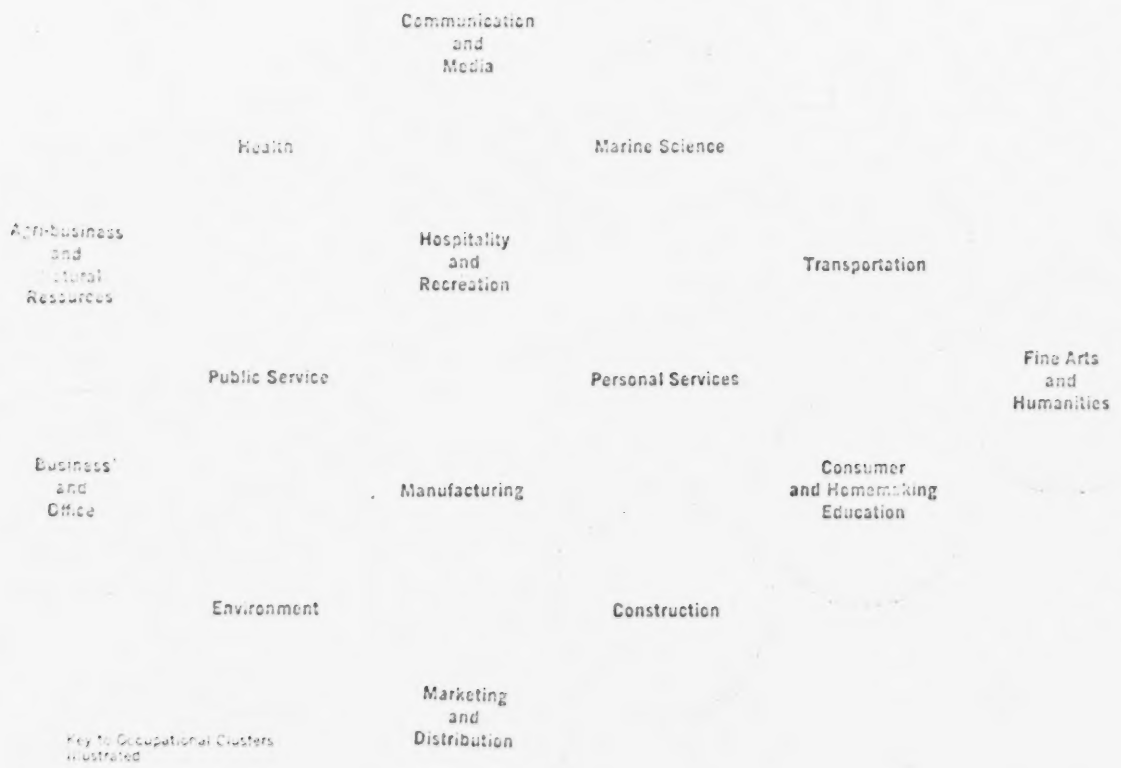
   C. To improve the overall student performance by unifying and focusing basic subjects around career development theme.

   D. K-2 - Develop basically awareness, interdependence on work, proper attitudes, lack of prejudice, and become sensitive to dignity of all work.

   E. GRADES 3-6 - Becomes sensitive that world is made up of career clusters (Kinds of jobs that have enough similarities so can be grouped.)

      EX: Health - Folding sheets (retards) to M.D. or psychiatrist

The USOE has determined that the career education cluster or family approach will provide the better spectrum for studying kinds of occupations. USOE has developed 15 occupational clusters - 22, 500 job occupations (In 1972 - 24, 500 occupations).



* U. S. GOVERNMENT PRINTING OFFICE : 1971 O - 44[illegible]

2. GRADES 7-9 - CAREER EXPLORATION

A. To provide the student opportunities to examine more closely those clusters or broad groupings of related occupations in which he is most interested;

B. To provide experiences so that the student begins to equate his aptitude, interests, values, and needs to various occupational roles;

C. Exploration implies hands-on-experience, simulated, observation, audio-visual, and/or work experience.

D. Subject matter is more relevant because it is unified and focused around a career development theme.

NOTE:

The elementary orientation and the prevocational and exploratory informational type of education starting in the elementary grades and continuing in the junior high grades 7, 8, and 9, is aimed at providing an elementary literacy and a familiarity with the fields of employment opportunity. This will serve to make the individual an informed person about the variety of challenging and interesting work in the modern world, society's need to get it done and build respect for those who do it. It may quicken his interest in further pursuing some aspect of his chosen cluster of work as a career. It will also equip him with the basic tools of language, number, organized ideas and knowledge and social awareness which marks the difference between the literate and the illiterate.

The concept is one of providing different subject matter emphasis to the teaching of our youth in our schools; not of displacing segments of the curriculum. It relates to the subjects taught by all teachers; so that real occupational information will be used to provide an interesting and fresh emphasis and heightened student

interest and motivation whether the class deals with history, language, general science, health, social science, or whatever.

3. GRADES 10-12 - GREATER IN-DEPTH EXPLORATION PREPARATION (implies gaining basic knowledge and skills which eventually lead to entry level jobs or further preparation.)

A. 10th Grade - Begins in-depth exploration of an occupational cluster; but providing a foundation for further progress; leaves open the option to move between clusters.

- During 10th grade develops very basic skills; may include certain elementary job-entry skills like general typist, construction helper (age factor), social work aide, service station attendant.
- 10th grader's view of life is narrowly constrained, thus means for constant reassesment of career choices must be built into the system beyond this time.

B. 11-12 Grades - Receive intensive preparation in a selected cluster (or group) or in a specific occupation in terms of one of the three options.

- Takes prerequisites for further education and/or intensive skill training for job entry.
- Preparation can include on-job training, occupational education, vocational education, distributive education or business.
- Cooperative Education.
- It is visualized that students will have an opportunity to enjoy actual work experience during their high school years through cooperative arrangements with employers. Yet each student's program will remain flexible enough to enable him to switch to a related occupation

later with a minimum of supplementary training. In addition, each student in a career education program will always retain the option of going on to a vocational or technical supportive or professional occupational objective beyond high school at whatever stage or time in his employment experience it fits his needs.

C. Guidance and Counseling - (important throughout school system)

To provide intensive guidance and counseling in preparation for employment and /or further education;

, To insure placement and

, To maintain continuous follow through.

D. Those students preparing for postsecondary occupational education or for four year college entry will continue to be provided occupational cluster experiences including work experience where possible with the academic subject being related to the professional area for which they are preparing. Students engaging in specialized job preparation will be provided with basic academic skills essential for further education. Thus every student will leave the system with at least entry-level job skills and with facility in basic academic subjects sufficient to enable entry into further education.

KEY:

Each student master the skills that he will be required to live by. Whether these skills are labeled academic or vocational is beside the point! The essential need is that every student be equipped to live his life as a fulfilled human being.

If he is to live his life with machines, he must know how to use them.

If he is to live with a slide rule or a computer, he must understand its magic!

If he is to combat diseases that afflict mankind, he must know a great deal about the human body and mind and all ills heir to!

4. POST - SECONDARY EDUCATION:

A. Post -secondary training includes any preparation required by an individual so he can enter employment at any remunerable task; to improve his or her knowledge or skills as they relate to his job or prepare for a new one at whatever stage in his working career (or careers) that such education may be beneficial to them.

B. It is becoming increasingly clear that the largest increase in job opportunities in the Nation's workforce is now and will continue to be for persons below the baccalaureate level with the specialized skills and knowledge which will permit them to support the professional leadership in the Nation's work and to guide the efforts of skilled and semi-skilled persons at the technical and specialists level in all major fields of work.

- The final specialized schooling and work experience required to prepare such specialized supportive people must be based on high school preparation but most of it will continue to be gained beyond the high school.

C. Emphasis beyond the high school must be :

1. to provide opportunity and encouragement to more adults to upgrade their skills and knowledge on their present jobs.

2. to learn new skills and knowledge to change or advance their careers.

3. to make employable persons whose jobs have been eliminated by mechanization or have been displaced by organizational or technological changes; and to provide saleable skills to those who have never been in the workforce.

D. Post - secondary two year schools should:

(1) Be comprehensive with academic, occupational, and general education programs, and supportive functions.

(2) Be available to all persons throughout their lives.

(3) Provide occupational programs with fullest support and status;

(4) Provide guidance programs - occupational and personal;

(5) Provide developmental programs available;

(6) Include adequate equipment, specialized faculty, and small classes, results in expensive programs.

(7) Understand that transportation cheapest part of education - cannot expect to have, nor can state support, institutions that cannot provide total comprehensive program - takes people and money to operate efficiently and effectively!

E. Articulation - highly important and significant to provide a smooth transition for students between vocational education courses in high school and any two year college that offers a similar program; so that student does not waste his time, this philosophy is also consistent with the "career ladder" notion that a student should be able to move smoothly from one level to another in a job cluster.

F. Advanced placement should be available for qualified students - a proficiency examination given in those fields or courses in which the student deems himself qualified; if a satisfactory effort has been achieved, it is well to provide for a conference between the teacher and student. The conference provides an opportunity for the student to review his own competency in relation to the objectives of the course(s), and the program in which he is enrolled.

5. KINDS OF WORKERS PREPARED IN POST-HIGH SCHOOL EDUCATION

Almost all professionals, most technicians and similar supportive specialists, and many skilled workers will continue into institutions beyond the high school before they enter the work for which their career preparation equips them; and almost all, if not all of these workers will at various times throughout their working careers, return to institutions beyond the high school for formal upgrading, updating, or additional preparation for their careers in order to cope with inevitably more complex work.

A. Skilled Workers.

- Workers who must learn most of their mature work skills beyond high skill are the skilled and semi-skilled workers and service personnel.
- Must be prepared to perform tasks which are repetitive and require skill to do them efficiently, economically and well.
- Examples include: skilled maintenance workers, assembly or manufacturing process workers, equipment servicemen, specialized laboratory workers, typists and special clerical persons, automotive maintenance personnel, the craftsmen who build our buildings and equip them by installing the services of truck drivers, machinery operators.

- The specific tasks performed may be learned in laboratories or simulated conditions, but most often skilled workers first learn their jobs, then perfect their skills on the job.
- Pertinent understandings of certain scientific and mathematical principles as they relate to the work which the skilled person performs are necessary.
- Skilled and semi-skilled workers and service personnel must be literate and trained workers in our society.

B. Technicians and similarly specialized supportive personnel.

- Their education requires comprehension of the basic principles and technological knowledge of the professional whose efforts they support and under whose direction they work.
- Ability and skills to do many of the technical tasks which the professional originally did but which a trained supportive person can do under the professional's direction.
- Frequently learn managerial and administrative skills which permit them to direct the efforts of the skilled and semi-skilled workers whose efforts are required to accomplish the tasks in the field - usually these administrative skills are learned after the person is employed.
- Technicians require less than a baccalaureate education to start their career as a supportive person, usually requiring from one-and-a-half to three years of organized study beyond high school to prepare them to start working in the field.
- Technical supportive people perform tasks and services which involve very important responsibilities.

C. Professional and Managerial Career Education.

- Persons who seek a career in one of the recognized professional fields follow a traditional baccalaureate program designed to prepare them for their particular field, and additional education of the formal kind usually found in colleges, universities, or specialized professional learning centers. These people need:

  1) Broadest base of underlying related organized and theoretical knowledge plus their specialized knowledge and skill preparation, whatever their field.

  2) Requires the longest educational preparation before entering the work which they will do of all the usual types of workers.

  3) Constant additional updating and further study is required.

6. Key Ingredients In Addition To Training, Whatever the Level, Include:

- Career Placement - (crucial but most neglected)

  A. Involves placement commensurate with preparation.

  - If job entry - help secure, and follow-up.
  - If further preparation - to proper institution - follow-up.

  B. Not only for counselors but for teachers, job entrance is as important as college entrance.

. Career Advancement

A. Too many think - "have a job, will be satisfied, the end - then get in rut."

B. Must help people "Chart their course for life and job fulfillment" - plans for advancement within job, cluster, or even another field because dead end jobs are frustrating. Persons need to upgrade and retrain through continued education program.

C. Provide for:

. Continuing and adult education

. Expand comprehensive college and professional opportunities

. Take to people

SO

PEOPLE CAN ENTER (GO)

LEAVE (STOP)

ENTER (GO)

WHEN SO MOTIVATED.

WHERE DO WE STAND?

Well, the truth is, our theories of education are so far ahead of our practices that the average school system is in the dark ages in terms of a total commitment to relevant education. HOW DO WE ANSWER THE FOLLOWING QUESTIONS?

A. How many school administrators have developed, as a result of a detailed study involving all facets of the community, the goals to be achieved, and how, for their school system? For that matter, what has the state done?

B. How many school systems make an effort to provide all of their teachers with pre or in-service preparation programs to prepare them to be good teachers of career education?

C. How many middle or junior high schools have programs that provide career exploration for the students?

D. How many high schools have a comprehensive program that provides for total student needs?

E. How many programs of vocational and technical education are available to the average student in the typical two-year post-secondary institution; and

F. What senior institutions provide technical and professional preparation for all types of occupational teachers, counselors, and administrators?

G. How may we reshape the college preparatory, general curriculum, and vocational training programs into a new mutually beneficial whole known as career education?

NECESSARY COMPONENTS FOR SYSTEM SUCCESS INCLUDE:

1. The Teacher. Central to the success of any program is the dedicated teacher; a teacher who possesses background knowledge in teaching content, to skills and enthusiasm.

   A. Teachers of mathematics, English, chemistry, physics, the social sciences and the humanities - must acquire some real world-of-work experience other than teaching so that their teaching becomes relevant.

   B. Teacher education institutions must use new methods of preparing teachers.

      - Beyond the expected expertise in methods and philosophy of education, they must have a depth in their subject matter which they can pass on to their students with appropriate application to the working world outside the classroom.

   C. Every school and every teacher should have lists of qualified persons from industry and the professions who are able and willing to come into the classroom where they can pass on knowledge and even skills of their trade or profession.

   D. Work experience must become mandatory in the preparation of all teachers.

2. The Elementary School Curriculum.

   A. Totally revise curriculum.

   B. Children must be made aware of work opportunities at an early age if they are to make meaningful career selections early enough in their lives to eliminate "false starts" and poor choices that may influence the rest of their lives. Goal of elementary teacher - help individual

children acquire set of work values.

C. Career information could be worked into classes aimed at developing communication skills.

- Basic readers could just as easily be used to accelerate the child's motivational identity with a career goal. Rather than going through the simple reading exercises of "See Spot jump" or "Watch Dick run", couldn't the child get much more insight into his community's work life with "See the machine run?"

D. Central to the success of such education is the use of new teaching techniques - computer aided instruction, video taped lessons, programmed learning, self-paced instruction, and hands-on activities.

3. Secondary School Curriculum. The secondary school curriculum too should be completely reorganized. Every student should be employable upon graduation from high school, or he should be ready to continue in some type of career preparation program. Well over half of all high school students graduate from a general education "track." We should eliminate this track and redirect courses to more meaningful educational and training experiences.

4. The Two-Year College - semi-professional curriculums, one and two years long, designed to prepare youth for an entry job on the technician level. The traditional role of the junior college as a "feeder" school for the university must disappear and the administrators of these colleges must gear their thinking and their actions to non-transfer aspects of the school; only then will they be properly serving.

5. Guidance Counselors. Certainly, counselors have been severely criticized for not being prepared to counsel those of less than baccalaureate aspirations. He has had very little help from psychological testing services to identify the creative talents of those who should follow careers as semi-professional support personnel for the various professional groups. We need to develop a guidance counseling system that starts working with children at an early age. In this activity, the articulated input from all of the teachers is central to a successful operation.

6. Industry - Can provide opportunities for the teachers to work in industry so they, in turn, can bring firsthand experiences back into their classrooms. Secondly, the actual employment of students helps them develop a sound work ethic. A well articulated work-study would accomplish this.

7. Use Newest Techniques: Industry resource people should be sought to give supplementary instruction - using portable video tape equipment, educational television, and computer assisted instruction.

8. Funds. The need for new funding methods should be apparent to everyone. Recent State Supreme Court decisions have already charted a direction toward equitable funding. In addition to this, the existing funding pattern, providing large amounts of money for general education, must be reorganized to channel funds into a career education thrust. This will require the re-direction of monies for preparing new teachers; for equipping new laboratories and work stations for our students in various kinds of occupational activities at all levels; for developing new curriculums to meet the needs of the future; and a host of other activities.

9. Evaluation. Through the years the educational system had done a poor job of market research and evaluation: follow-up programs on percentages of high school graduates who go on to college; on those who dropped out; on graduates of the high school after a year in college. The need for follow-up information and feedback into the system is essential to the success of any kind of a business venture.

In any kind of an evaluative effort, plans must be made to incorporate a broadly-based statewide and regional evaluation and follow-up.

10. Manpower Needs. It is difficult to realize how it is possible to structure any kind of realistic educational program to prepare our youth for jobs without meaningful manpower data. Sufficient data on manpower needs is necessary for sound planning - the need for data to predict the needs of people in various areas.

11. Continuing Education. The concept of continuing education must be ingrained in our students from the time they enroll in elementary schools. We anticipate that most workers entering the work force today will change their occupations three to 10 times during their working years. We must mount a large-scale program focusing upon the continuing education and training needs of our unemployed adult population.

Our federally funded manpower training programs are evidence of the need for this kind of an activity. The educational establishment must accept this as part of their ongoing responsibility for keeping our national work-force employable.

12. THE REAL KEY - LEADERSHIP. Leadership must come among those who are knowledgeable about the changes that must be made.

13. IN SUMMARY, the necessary component parts of career education include:

A. Teachers who understand and emphasize career implications in course content - gives meaning and relevance to academic subject matter, and understanding of importance of said subjects to various careers.

B. Teach understanding of careers and personal qualities and abilities required.

C. Utilize active cooperation and participation of school and non-school personnel.

D. Obtain cooperation and involvement of private, public, and labor organizations.

E. Recognize and capitalize upon interrelationships among home, family, community, and occupational society.

AN ACTION PLAN
for
IMPLEMENTING
CAREER EDUCATION

THREE MAJOR FACTORS: PERSONNEL, RESOURCES, ACTIVITIES

An educational plan represents an orderly sequence of one or more combinations of the above factors within a time frame.

Planning Committee - Persons from Administration, Faculty, Community.
with interest (Also State and College as advisory)
and commitment

Ten Action Steps for Implementing Career Education *

1. PHASE I - Define Goals, develop strategy for achieving.
   A. Organize the appropriate interactive network of interested individuals and groups.
   B. Gain an understanding of the concepts of career education and establish appropriate educational objectives.
2. PHASE II - Organize resources in preparation for program of action.
   A. Study the current educational system to determine the changes necessary to turn it into a true career education system.
   B. Inventory and marshal all available resources.
   C. Begin planning the career education system most appropriate for your community.

* Kenneth B. Hoyt, Rupert N. Evans, Edward F. Mackin, Garth L. Mangum, Career Education: What It Is and How To Do It (Olympus Publishing Company, Salt Lake City, Utah, 1972)

3. PHASE III - Program Implementation.

   A. Seek the cooperation of all necessary organizations, institutions, and individuals.

   B. Implement the system.

   C. Put the evaluative process in operation to determine how well the system is working.

4. PHASE IV - Program evaluation, improvement, expansion.

   A. Create a feedback system to use evaluation findings to adapt and improve career education programs.

   B. Make provision for a program of maintenance to sustain the vital parts of the system and the initiative, and tie these activities into the interactive network.

PROCEDURES:

A set of procedures has been designed by U.S.O.E.'s Bureau of Adult, Vocational, and Technical Education through which a school system might restructure its present activities in order to implement an educational program to meet career education objectives.

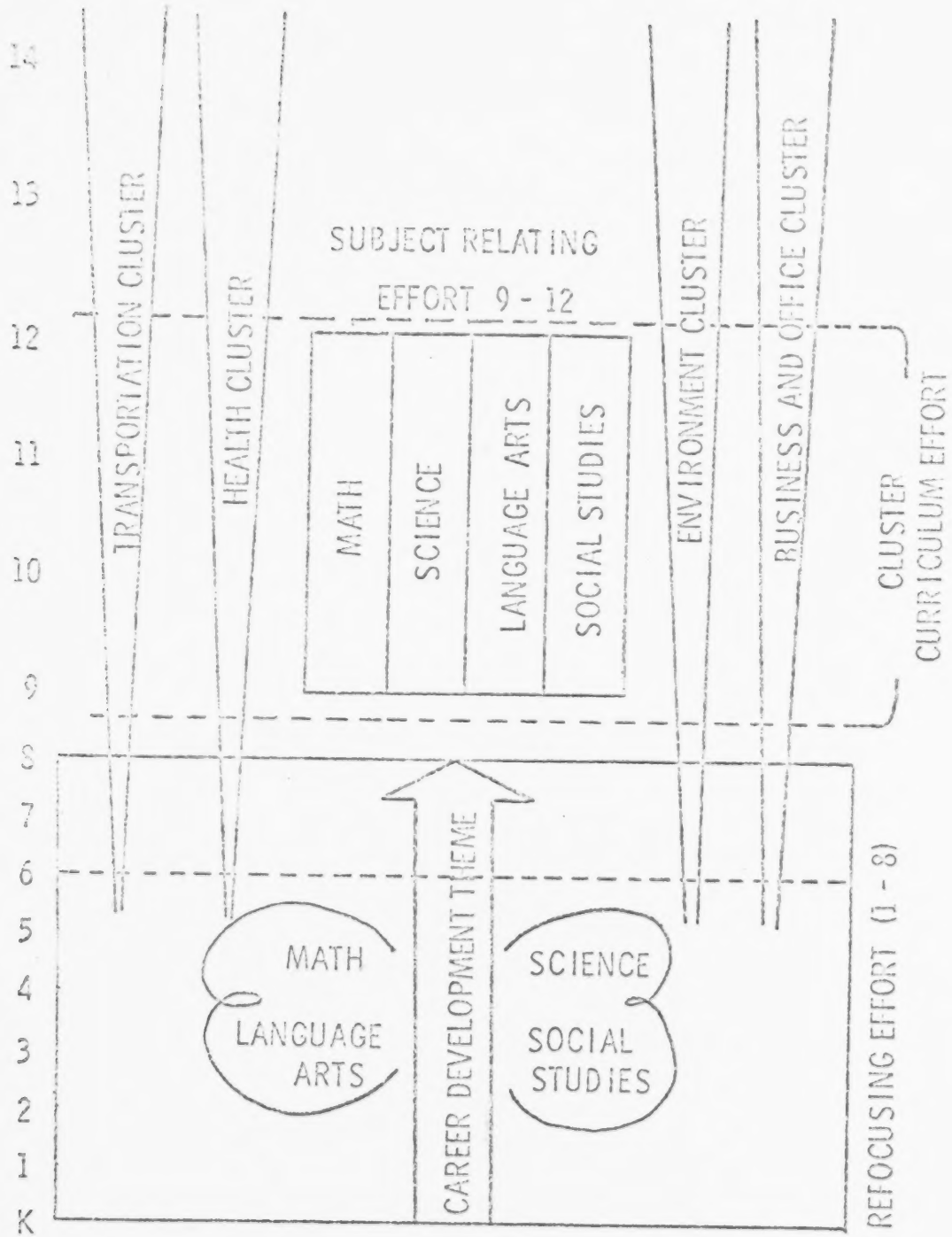
The procedures include:

A. Curriculum development at all grade levels, K-12, represents the central procedure around which other supporting activities would function! The curriculum development undertaking is actually a triple-pronged effort involving (1) an occupational cluster curriculum effort (10-12), (2) a curriculum refocusing effort for grades 1-9, and (3) a subject-matter relating effort in grades 10-12.

B. The largest and most involved component of the curriculum development undertaking is the cluster curriculum effort whereby complete cluster-core curriculums, within occupational clusters, for grades 10-12 are developed. Suitable instructional materials and media need to be selected and/or developed for each occupational area. A one-semester exploratory curriculum for the occupational clusters needs to be developed for Grades 7-9 students, to include on-site observation, work experience, hands-on laboratory experience, role playing, and other appropriate activities. Suitable instructional materials and media will be selected and/or developed for this one-semester exploratory curriculum in each occupational cluster. It is also necessary to provide guidelines and materials for use in Grades K-6 that will insure that occupational information provided at the elementary school level is technically accurate and comprehensive.

C. The second component of the curriculum development undertaking is a major curriculum refocusing effort for grades 1-9; to develop a system of behavioral objectives for these grades that reflects career development concepts and responds to differences in learner characteristics. Those career development behavioral objectives which can best be met in the subject areas (language arts, math, science, social science) should refocus that subject's curriculum around the career development behavioral objectives. After the subject area curriculums have been refocused, appropriate learning interventions should be chosen or developed.

D. The third component of the curriculum development undertaking will be the subject matter relating effort for grades 10-12; to relate the subject areas taught at grades 10-12 (science, language arts, social studies, and math) to the content of the curriculums established by the cluster curriculum. It is necessary to identify those competencies for each occupational cluster; this will insure the inclusion of these competencies in the subject area objectives and activities. The resulting reoriented subject area curriculum will provide activities which are clearly identified with the occupational cluster and/or the specific occupation for which the student is preparing. The subject areas will be refocused around the occupational theme in such a way as to make the basic subject matter more meaningful and relevant to the students, thereby improving the student performance in the subject areas themselves.



THE TRIPLE-PRONGED EFFORT
TO RESTRUCTURE THE EDUCATIONAL PROGRAM
AROUND CAREER EDUCATION *

* Career Education: A Model for Implementation, Div. of Vocational and Technical Education, Bureau of Adult, Vocational, and Technical Education, U.S. Office of Education, Washington, D.C., May 1971.

APPLICATION FOR NORTH DAKOTA:

A. There are many school systems with small enrollments in our state; however, these students need and desire the same consideration as students who attend a school system where a comprehensive program is or may be implemented. If parents and taxpayers desire to operate a small school, then they should be willing to pay the price or understand that students involved will be penalized.

B. All operating school systems should be able to develop an action plan for implementation, or they should not operate, as proposed above, and to include the following minimum programs:

- Curriculum development
- Career awareness - Grades K (or 1) - 6
- Career exploration - Grades 7 - 9
- Grades 7 - 12 General industrial arts shop, some cooperative work experience programs, business education, home economics, agri-business. Extensive use of simulated, audio-visual, and observation methods should be developed for career education instruction use.
- Guidance and counseling, placement, follow-up.
- Extensive use of post-secondary institutions, mainly two year comprehensive colleges.

C, School systems with appropriate enrollments and outside sources should employ additional appropriate techniques for grades 10 - 12 so that students have access to the total program needs, and adapt industrial arts and occupational programs to total advantage. Vocational centers should be considered where feasible.

D. Extensive use of services and information provided by the State Department of Public Instruction including:

- Career information center on wheels - this center could move from one community to another to provide information to high school students, the unemployed and underemployed. Information about new jobs, aptitude tests, post-secondary school and job information.
- "Job Information" on microfilm with reader-printer. (slides, super 8 movies, etc.) Information about job clusters and specific jobs, such as job description, education and personal characteristics, salary, training centers, knowledgeable persons, etc.

  NOTE: While there are a growing number of occupations, a large percentage of persons are employed in similar jobs or clusters. (Approximately 95% of people employed in 490 occupations.)
- Career resource information - available from schools, individuals, industries.
- Brochures and pamphlets.
- Identify core of knowledge pertinent to in-service teacher and administration education.

E. Utilize studies develoved by the Federal Government for four major career models: School-based, employer-based, home-based, and residential.

- The center for Vocational and Technical Education of Ohio State University is administering the school-based model with help from six school districts across the courtry.
- Visit the residential program at Glasgow, Montana, on the former Air Command base.

F. Dr. John C. Holland, John Hopkins University, has published a study on the personality characteristics of persons employed in different occupations. This study should be on a professional educators reading "must list".

RECOMMENDATIONS:

1. That we understand that North Dakota people do not live in a vacuum, thus we must prepare our people to live and work in the private enterprise system anywhere in the country;
2. That we can afford the costs, but not the low productivity that prevails; therefore priority consideration must be given to being organized to do the task properly, not more dollars to do an even greater ineffective job at greater inefficiency;
3. That we operate all school districts in the most effective and efficient manner; therefore the legislature should provide for all taxable land and other property to be placed so-far-as-possible in school districts with adequate taxable valuation and enrollment; and
4. That the State Department of Public Instruction should provide the leadership for career program development, and employ a director, career education, who would with the advice and counsel of a broadly representative committee establish recommended guidelines and objectives for information and implementation proposals for establishing effective career education programs for various size school systems.

THE VALUES OF THE PROGRAMS

1. Open-door concept would be a reality;
2. Every person who graduates from high school hopefully prepared:
   A. to utilize salable skill in job-entry employment. (no dropouts, only indivituals who choose to pursue different kinds of education or go to work);
   B. to enroll in post-secondary occupational program, normally for one or two years;
   C. to enroll in a post-secondary program for four or more years.
3. Every person equipped academically, emotionally, and occupationally to spin off from the educational process at whatever level chosen. Thus it demands no permanent bondage to a career goal; instead it informs students of the great number of opportunities and options.
4. Faculties would gain renewed sense of accomplishment by giving students realistic and effective preparation for life.
5. Schools will be animated and joyful places rather than fortresses of despair.
6. Support from taxpayers, parents, and participants.
   - Accountability
   - Credibility

CONCLUSION:

Education must be responsive to the needs of all, not only a few. Our country was founded on the belief that people would have an "opportunity to achieve" democracy! Career education is democratic in that it offers individual fulfillment and assures society's maintenance and progress. It merely requires "change" -

waste than the waste of human potential. And there is no better investment than an investment in human fulfillment." Career education can help make education and training more:

meaningful for the student,

rewarding for the teacher,

available to the adult,

relevant for the disadvantaged,

productive for our country.

Ladies and Gentlemen, you represent the educational leadership, you understand what it is all about. - LET'S GET WITH IT!